WORKING DRAFT

Virtual Work Environment

For Improving Outcomes in
Virginia Social Service System

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1. Executive Summary

The Information Technology Investment Management (ITIM) Board approved a vision to use in planning an Integrated Social Services Delivery System (ISSDS). This vision provided direction for planning for the future. As an initial step in moving toward the ISSDS vision the ITIM Board approved the establishment of five Enterprise Work Groups to examine issues related to our current automation and make recommendations for transition to shared common interface and information.

Enterprise Business Process View (EPBV) Workgroup was empanelled in May 2006 and given the task to research and make recommendations regarding improving how data and information should be presented/viewed by Virginia Social Service System consumers, in an automated manner that is consistent with the objectives of the Business Process Re-Engineering To-Be Model. The challenge was to determine common business views for shared processes across programs; comply with the Department of Social Services policies and standards; and stay consistent with BPR recommendations within a six month timeframe. The improvements were to focus on the consumer and improving their experience while increasing the effectiveness of our business process.

The business of Health and Human Services is changing rapidly, which means processes must also change to keep pace with emerging requirements. Natural disasters like Hurricane Katrina and other threatening emergencies such as an outbreak of a pandemic flu all contribute to a demand for integrated mobile approaches which can help citizens when and where they need help.

In order to successfully achieve the outcomes of our strategic plan the culture of our work environment must be aligned to our vision, mission, guiding principles and integral to our daily work. That culture is flexible, dynamic and responsive with high respect and trust. Initiative, innovation and creativity must be inherent and valued. We must recognize that change is the constant; the degree of change is the variable.

The Enterprise Business Process View Workgroup believes that moving toward a Virtual Work Environment is imperative as we move toward the development of flexible, process oriented solutions with improved accountability. Virtual office, mobility and telework are variables in this Virtual Work Environment that must be implemented in order to improve the quality, reliability and standardization of the data collected; improve accountability; improve the quality and effectiveness of our products and services; reduce the caseworker's paperwork burden; and most important provide efficient and effective customer service.

The latest *Telework Exchange* study, "Federal Contact: Bird Flu in America," reveals that the Federal government will grind to a halt in the event of a

pandemic flu outbreak – only 27 percent of Federal employees would report to the office. Federal government employees revealed that their agencies are unprepared for a pandemic-related business interruption. An alarming 71 percent asserted that their agency is "not prepared to continue business operations in the wake of a pandemic. Equally alarming is that 89 percent indicate their agency has provided no guidance on how to respond to a pandemic outbreak. Only 21 percent knew for sure if their agency had a pandemic COOP plan. These numbers seem to indicate that the Federal government is very much unprepared to handle an outbreak. Is Virginia any better prepared? What will the state and local governments do when its employees can't or just do not come to work?

The Enterprise Business Process View Workgroup recommends that the virtual office, mobility, and telework be introduced immediately as business practices by implementing separate pilots to evaluate and refine these business practices for the enterprise. Additionally, the Virginia Department of Social Services Continuity of Operations Plan should include a Disaster Recovery Plan and process which would incorporate the virtual office, mobility and telework or working off site with alternative work schedules for workers. The Virginia Social Service System must make the necessary preparations to enable workers to use mobility effectively during an emergency including testing the system and process capabilities.

The Enterprise Business Process View workgroup views the recommendations in this deliverable as movement toward reaching the goal of mobility as defined in the BPR's "To Be" report and complying with the mandates in the Governor's Executive Orders. Adding the strategies of the virtual office, mobility and telework is needed to continually move toward the vision and goals established in the Virginia Social Services System Strategic Plan.

2. Acronyms

The following acronyms may be found within this document.

BPR	Business Process Re-engineering
COOP	Continuity of Operations Plan
DIS	Division of Information Systems
EA	Enterprise Architecture
EBPV	Enterprise Business Process View
ECM	Enterprise Case Management
EIM	Enterprise Information Management
EWG	Enterprise Workgroup
GAO	General Accountability Office
ISSDS	Integrated Social Services Delivery System
IT	Information Technology
ITIB	Information Technology Investment Board

LDSS	Local Department of Social Services
SDLM	Software Development Lifecycle Management
UIAR	User Information Access and Reporting
VDSS	Virginia Department of Social Services
VSSS	Virginia Social Service System
VITA	Virginia Information Technology Agency
VWE	Virtual Work Environment

3. Background

Currently health and human services agencies across the nation are being challenged to cut costs and improve accountability. This has frequently resulted in duplicative efforts, dropped or missed cases, and sluggish response mechanisms which are the result of a labyrinth of disconnected systems and processes. The silo-like architecture of legacy applications has lead to fragmented service delivery, duplication of date and effort, and the inability to make changes in a timely manner. Nationwide web-based applications and services are being considered to help solve these problems without breaking government budgets.

Health and Human Services agencies comprise more than 40 percent of most state's spending, with $8 billion for human services and $5 billion for healthcare IT spending nationwide. Spending, broken processes and fragmented care are rampant. Complexities in state and federal funding further complicate matters creating redundant administrative reporting requirements and other inefficiencies. Citizens rely on multiple agencies yet too often providers are not able to effectively coordinate care across multiple agencies and processes resulting in confusion, redundancy, and frustration for families and individuals who must navigate a bureaucratic system while trying to obtain the help they may need.

Case management applications are often the focus of state's reform efforts because different legacy systems at state and local agencies simply don't talk to each other even though many of these agencies have overlapping clients. Clearly there is a need to improve the experience for the consumer. Yet at the same time, agencies are feeling the heat to increase their accountability regarding outcomes and financial management.

The challenge is to undo the morass of disconnected silos and realize the vision of connected human services. We must focus on developing flexible, process oriented solutions which enable people to more easily access data locked in legacy systems. This is particularly critical as we plan to move toward people who are working remotely. A web-enabled infrastructure will support and help to deliver the following critical transitions for case management:

- From a functional perspective to a process orientation
- From a built-to-last model to a build-to-change model

- From application silos to loosely-coupled, orchestrated solutions

Therefore our business objectives are moving to a perspective that values the holistic process that supports the Enterprise mission; creating models that are dynamic, malleable and built-to change while ensuring that our applications work in harmony with each other.

The Enterprise Business Process View (EPBV) Workgroup empanelled in May 2006, began work by identifying core values to be applied to any process or system developed. These core values are:

- Security/Integrity/Confidentiality (Systems must have integrity and high availability)
- Enterprise wide approach
- Fully integrated/Common view
- Flexible and easy to maintain or update
- User friendly and highly efficient
- Respectful of consumer privacy
- Available, accessible, and mobile (anywhere, anytime)
- Provide good consumer services (first impression is the key)
- Accountable at every level (360 degree system measurement)\

We acknowledge as part of the road map that there are no quick fixes, change must be incremental – over time, we must plan for change with a realistic and achievable plan for the enterprise, measure and adjust based on lessons we may learn along the way and build from there with continuous respect and understanding of human reaction to change.

In order to successfully achieve the outcomes of our strategic plan the culture of our work environment must be aligned to our vision, mission, guiding principles and integral to our daily work. The following items are a foundation of the new cultural paradigm and mirror the BPR recommendations for the culture of the VSSS work environment.

- Collaborative
- Flexible
- Dynamic
- Competency based
- Responsive
- Mutual respect and trust
- Accountable
- Interdependent
- Mobile
- Working off site with alternate work schedules

Change is the constant; the degree of change is the variable. We must focus on improving accountability; improving the quality and effectiveness of our products

and services; reducing the caseworker's paperwork burden and most important provide efficient and effective consumer service.

4. Justification

Studies and research has shown that about 80% of our daily work has nothing to do with the information we enter into our legacy systems. The percentage might be less than 80 for front line workers but it is still a significant amount of their time. We identify, track and respond to external tasking; we monitor, facilitate and resolve internal tasking; provide daily coordination of "pop-up" events; communication via email, phone, meetings, face-to-face to resolve questions, clarify positions and solve issues; and continue to work on mission related activities.

Virtual Work Environment is defined as an adaptable, integrated, shared community workspace where co-located or distributed people can collaborate, work on tasks, and solve problems cooperatively using organizational intellectual capital (knowledge) and processes virtually. The Enterprise Business Process View Workgroup identified a Virtual Work Environment as an alternative space where knowledge workers can conduct their normal work assignments; teams, business units, and major organizational Divisions can conduct and manage their mission goals and objectives; and business with outside organizations, partners, customers, and contract support can be conducted.

In May 2006 the Government Accountability Office (GAO) released a report to the U.S. House Committee on Government Reform on how increased Telework capability could improve agencies' Continuity of Operations (COOP) planning. The report's title is a fair summary of the findings: "Continuity of Operations: Selected Agencies Could Improve Planning for Use of Alternate Facilities and Telework during Disruptions." The report, a follow-up to previous studies conducted by GAO, shows that of the 23 agencies consistently surveyed, nine indicated they had plans to use telework during a COOP event. The threat of a pandemic underscores the importance of agencies having robust telework/mobile work programs that can facilitate the social distancing needed in such an event. This report states that even though agencies are including telework in COOP plans, they must focus on building robust telework programs. Implementing telework programs will empower agencies to test their IT infrastructure as well as their cultural readiness answering the critical question 'Has the agency trained employees to effectively work remotely?'

In addition to responding to natural disasters or emergencies, confronted with the rising gas prices, increasing workloads, increasing number of staff and lack of physical space to adequately house staff are a few of the business challenges facing both Virginia Department of Social Services and local departments of social services.

Two states with traffic problems are offering financial incentives to encourage teleworking to relieve the congestion on their roads. Georgia and Virginia have financial incentive plans that encourage employers to implement telework programs.

Virginia has quite a commuting predicament in several metropolitan areas of the state. Northern Virginia is adjacent to Washington D.C. where the metro area is ranked even worse than Atlanta for traffic troubles – number three nationwide. The Commonwealth's leaders in an effort to free up the roadways explored telework as an alternative. Through the Telework!VA program, employers can receive up to $35,000 to establish and support a formal telework program. The concept started as a pilot project in 2001 and is now operational in the states three most congested areas – Northern Virginia, Hampton Roads, and Richmond. The Telework!VA web site (www.teleworkva.org) was revamped to include training modules to help organizations implement effective and sustainable telework programs. Businesses in Virginia will be able to find the resources needed to offer telework to employees – everything from how to gain management support to how to choose the right technology. In September 2006 Governor Timothy M. Kaine signed an Executive Order creating an Office of Telework Promotion and Broadband Assistance within the Office of the Secretary of Technology. This Office will encourage and promote telework activities for public and private employers.

Atlanta, Georgia is ranked as the nation's fourth worst area for traffic problems; drivers can typically expect a 67 minute delay in their commutes during rush hour. Reducing the number of cars is a key to alleviating the congestion. The Governor signed a law this spring that will financially assist businesses that want to offer employees a telework option. Effective for tax years 2008 and 2009, the bill gives Georgia employers a state income tax credit of up to $20,000 if they conduct a telework assessment and put together a business case. Those employers who actually put a telework program in place are rewarded with a tax credit of up to $1200 per employee to cover part of their telework expenses. Georgia is leading by example to encourage the private sector to consider teleworking as a viable alternative to the traditional workplace. Governor Sonny Purdue stated in an interview in April 2006 that "At this time approximately 3,000 state government employees are teleworkers, and 30,000 more work alternative work schedules to a void traffic congestion and reduce emissions that are harmful to Georgia's air quality." Information about Georgia's tax incentives for telework can be found at www.gms.state.ga.us/employee/telework.asp.

Adding the strategies of virtual office/mobility/telework will enhance accessibility to the services offer by the Virginia Social Service System (VDSSS). Expanding employee access to information is needed to accomplish the vision and goals established in the Virginia Social Service System Strategic Plan. We are defining and developing workflow processes that are seamlessly integrated across

divisions, department-wide information that is accurate and timely, and information systems that are adaptable, reliable and cost effective across a secure, scalable and highly available network infrastructure. The virtual office/mobility/telework is an integral component of implementing those processes.

As states are modifying or designing systems to meet all federal requirements for the Statewide Automated Child Welfare Information System (SACWIS), a number of states have piloted mobile access to their systems. Georgia partnered with Compact and Verizon to pilot the use of E-forms with Tablet PC's in 2005. When the State's Automated Child Welfare Information System (SACWIS) became operational, these Tablet PCs were fully integrated in that system as well. This was part of an effort to help reduce caseloads, while increasing efficiency. While the state of Wisconsin also piloted mobility as a process they used a cut down version of SACWIS so the systems were not fully integrated. South Carolina, Oregon, New Jersey and Texas to name a few have all piloted some version of increased access through mobility.

Ohio is currently implementing a mobile solution as a component of their SACWIS project. During the SACWIS application pilot, the project team is also piloting a mobile worker concept. They are providing 6 Compact NC 8320 laptops with a Verizon wireless mobile card to 18 people for 90 days. These individuals are child welfare workers across the continuum line staff and supervisors. This pilot will involve a level of specialized training prior to implementation for the caseworker using the mobile device, additional hardware in the form of a laptop, and some specialized way of accessing the application (either via real-time connection or data synchronization). During the pilot tracking is constantly maintained to measure and compare activities such as the use of wired access compared to wireless or Wireless Fidelity (WiFi) connections. In addition to the tracking, a short weekly survey will be completed by participants to identify progress or barriers and to assist in developing the plan for a statewide implementation if the outcomes are positive. There is a requirement for additional review of security within the application and for the mobile device itself as a part of the pilot project.

Security is a key concern any organization particularly during discussions about mobility. The top ten identified security musts identified by Jim Litchko, Author of KNOW Cyber risk and KNOW IT Security are:

- Rules – understand and comply with agency security policies. These are the rules folks must live by to survive cyber attacks and FISMA audits
- Anti-Virus – install and update anti-virus software frequently. Anti-virus is the cyber screen door and bug spray that keeps unwanted bugs from entering your system
- Anti-Spyware – Install and update software frequently. This prevents outsiders from remotely monitoring your activities.

- Firewall – Install, configure, and update as your agency instructs. The firewall is your system's filter and gate guard from the outside world.
- Encryption – Use encryption, secure socket layer (SSL), and virtual private network (VPN) as directed by your agency. These are secure pipes between your computer and agency system to prevent others from seeing and changing your information as it moves between the two.
- Update – configure the security and operating system software to automatically check for, retrieve, and install updates on a daily basis. (Updating software and scanning frequencies may seem extreme, but with processing and broadband speeds these operations are fast. It can be done while you are getting that morning cup of coffee.) New product vulnerabilities and cyber attacks are discovered every minute.
- Scan – Scan your system using your anti-virus and anti-spy ware software to identify and remove undesirable software programs at least twice a week. Look under the hood and check the tires for potential problems occasionally.
- Backup – Backup your information locally or to your agency's system in accordance with your agency's security policy. It's your insurance policy when security measures do not work.
- Physical – Ensure proper physical security measures are used to prevent physical and visual access to sensitive information. Lock your door and turn your computer screen away from the windows and others.
- Common Sense – Use strong passwords and don't write them down, only connect when necessary, turn off the computer when not in use, never open attachments or accept software from strangers, and stay aware and follow new security procedures and cautions.

In addition to these bulleted items on-going training is an integral part of maintaining security. While these security items are already included in VDSS security policy they should be thoroughly integrated in any policy, processes and training related to mobile access for staff throughout the enterprise.

Congressman Frank Wolf in his capacity as Chairman of the House Science-State-Justice-Commerce Subcommittee has established an accountability program that can fine federal agencies under his Subcommittee's oversight $5 million if they do not demonstrate that their agencies are taking steps to promote telework and ensure eligible employees can work form alternate work locations.

Several federal agencies have implemented processes using telework or mobility through web access. The Federal Aviation Administration (FAA) has implemented an interesting approach that supports telework for employees through out the world. They have implemented Knowledge Services Network (KSN) and currently 25,000 staff call it their "office away from the office". KSN was implemented in 1998 as an experiment to identify a process for co-workers to virtually connect across the country. The FAA currently provides its worldwide workforce with access to this secure, shared virtual office suite that mimics a typical "real world" office. Think document management, meeting spaces, project

teams, libraries, and tight security all in cyberspace. Today the FAA's Pandemic Crisis Response Steering Committee is looking to the KSN as a possible solution to help keep the agency up and running in the event employees must be socially isolated to stem a flu pandemic.

An example of KSN's virtual capacity is that as part of its mission, the FAA writes aviation regulations. Regulations were written which impacted folks all over the country and too often they were not given adequate time to examine the regulation and comment prior to it being finalized. Currently regulations can be posted where employees and stakeholders throughout the world have an opportunity to provide comments. Ronald Simmons, Scientific and Technical Advisor for the FAA and lead on KSN stated in an interview to Telework Exchange that, "Technology is only 20 percent of the total solution. Preparation, change management and training were critical to the implementation With 25,000 employees and stakeholders already competent with collaborative virtual tools the FAA is a jump ahead in preparing for a crisis.

Over the last year, the FAA estimates roughly $7 million cost avoidance directly attributable to the KSN. The agency monitored virtual meetings, which mean less travel expenses. KSN supports approximately 80 such meetings a week, saving the agency nearly $3.4 million annually. Using a complex military analysis model, the FAA believes KSN saves around $4 million annually by giving employees an easier, more efficient way to find and share information and avoid duplicating efforts. To measure outcomes and validate internal observation an independent company was hired to conduct a Business Value Model (BVM). The result reported from this process was that the cost avoidance directly attributable to KSN was almost identical to the internal estimates.

The Securities and Exchange Commission (SEC) employees are eligible to telework. SEC Chairman is Christopher Cox, a former Congressman and fervent telework advocate. He is credited for the organization's current success with telework. Today, 30 percent of the SEC employees' are teleworking in some capacity. The SEC worked closely with the union to include telework in its charter. They administered telework training for supervisors throughout the agency to help them understand and accept the concept of telework. Along with the shift in the working culture, technology evolved. Initially laptops were provided and programmed to remotely access the Virtual Private Network (VPN) along with remote access "tokens". Today teleworkers access files remotely via the internet, from anywhere, anytime, so the use of employee personal computers is an option. Security was a key concern for the SEC leadership. While most of today's software packages have adequate security built-in, the SEC technology experts added extra layers on top of that to provide a very secure solution for their agency.

The SEC also has a pilot project underway to see how the organization might operate even more effectively through increased telework options. Since April

2005, 10 employees have been working full time, or close to it, from their homes. Five of those employees are working remotely five days a week, and five others are teleworking four days. Each teleworker received a laptop, docking station, monitor, printer, router, fax machine, shredder, and Web camera for virtual conferencing. To ensure the best connectivity SEC agreed to pay 70 percent of each employee's broadband bill for high-speed Internet access at home. This pilot is still being monitored and the results have not been reported but the indications are that all project participants are effectively working from home and are pleased with the arrangement.

The Enterprise Business Process View Workgroup reviewed potential virtual work environments identifying these components that has to be considered for a successful virtual work environment –

Technology – what will best meet our business requirement?
Business Processes – Modify processes to support changing paradigms
Plan for Change – shift employees' behaviors to take full advantage of new business models such as virtual office or mobility
Training – Essential to ensure the workforce has the infrastructure to support new systems and processes.

5. Recommendations

The Enterprise Business Process View Workgroup recommends that the Virginia Department of Social Service continuity of Operations Plan will include a a Disaster Recover Plan and process that would incorporate the virtual office, alternative work locations and mobility for workers. In the VDSS Human Resource policy the term working off site with alternative work schedules is used instead of telework. In order to make the necessary preparations to allow workers to use alternate work locations and/or mobility during an emergency, the Enterprise Business Process View workgroup is recommending the following pilots. These pilots will test and validate both the system and the process capabilities.

The Enterprise Business Process View workgroup recommends that the virtual office, mobility and teleworking be introduced immediately as a business practice by implementing separate pilots. These pilots would be used to evaluate, validate and refine these business practices prior to a statewide implementation.

In a survey conducted by Randstad Review, 2001, 91% of surveyed employees list "TRUST" as their number one issue in the work environment. Virtual Work Environment is about changing behaviors which builds trust which builds collaboration. The four pillars of VWE are

- To identify the risks and benefits of moving business processes to virtual environments

- Define the functional requirements for information workers to work and collaborate more efficiently and effectively
- Develop an inexpensive technology environment matched to processes and workers needs
- Understand the learning infrastructure required for maximum adoption (vs deployment)

Virtual Work Environment –

In our research the EBPV workgroup found that the requirements for a Virtual Work Environment are internet connection and MS Office. The benefits are that the Virtual Work Environment provides a secure virtual office that supports a mobile, geographically diverse workforce; integrates with, e.g., VPN, online conferencing, instant messaging; supports prepared workforce to be able to work from anywhere and mobilize quickly for coordinated efforts.

We currently have four pilots underway using the virtual office and another pilot ready to begin. These pilots will help in developing processes and procedures for this business practice.

The Telework or Working Off-Site with Alternative Work Schedules pilot would have the following requirements:

- Representation (Managers, Supervisors and Line Staff) for the project team to participate in the pilot would include:
  - Local DSS Representation from one or more localities in each of the five regions
  - VDSS staff from each of the five regions and across all programs
  - VDSS staff from central office across all programs

  (*Currently a number of state staff have established telework agreements)*
- Strong Authentication will be incorporated in this activity
- Remote access to sensitive information shall be accessed through the Virtual Private Network where available, consumer identifiable information must be protected
- VDSS will monitor and evaluate use through the systems, participant feedback obtained through ongoing surveys and meetings held by video conference or teleconference
- Project team members agree to participate in the development and presentation of a report (written or oral) the the Commissioner of Virginia Department of Social Services and the Virginia League of Social Service Executives on the outcome of the pilot after the implementation.
- Project team members agree to participate in the development of any policies and guidelines related to telework and mobility as a result of these two pilots.
- Project team members agree to participate in the development of a statewide implementation plan and the necessary training to support the implementation.

- VDSS will conduct an ongoing cost/benefit analysis of the pilots and provide this information to the project team members.
- Implementation will follow the Software Development Lifecycle Methodology (SDLM)

The Mobility Pilot would have the following requirements:

- Representation (Managers, Supervisors and Line Staff) for the project team to participate in the pilot would include:
  - Local DSS Representation from one or more localities in each of the five regions
  - VDSS staff from each of the five regions and across all programs
  - VDSS staff from central office across all programs
- VDSS would provide laptops/notebooks with strong authentication devices for security, fully loaded with software and with mobile/air cards to all participants and high speed internet access
- Remote access to sensitive information shall be accessed through the Virtual Private Network where available, consumer identifiable information must be protected
- VDSS will monitor and evaluate use through the systems, participant feedback obtained through ongoing surveys and meetings held by video conference or teleconference.
- Project team members agree to participate in the development and presentation of a report (written or oral) to the Commissioner of Virginia Department of Social Services and the Virginia League of Social Service Executives on the outcome of the pilot one year after the implementation.
- Project team members agree to participate in the development of any policy and guidelines related to mobility and telework as a result of this pilot.
- Project team members agree to participate in the development of a statewide implementation plan and the necessary training to support the implementation.
- VDSS will conduct an ongoing cost/benefit analysis of the pilot and provide this information to the project team members
- Implementation will follow the Software Development Lifecycle Methodology (SDLM)

We currently have three localities and one regional office who have volunteered as potential pilot participants for the mobility pilot.

6. Conclusions

When the process of the virtual office/mobility/telework is fully implemented as a strategy this will lead to changes in operations, accountability, and performance with the ultimate goal to drive efficiencies, expand partnerships, increase

employee retention, and enhance the client experience. We must focus on developing flexible, process oriented solutions which enable people to more easily access data locked in legacy systems. In order to successfully The Enterprise Business Process View workgroup views this recommendation as movement toward reaching the goal of mobility and complying with the Governor's mandate. In the case of Virtual Work Environment, the difficulty of starting the journey is imagining the right path and destination; we believe the Enterprise Business Process View workgroup and chosen path and destination.